

REMARKS

Applicants have amended the specification, as required by the Examiner, in order to overcome the objections indicated by the Examiner. Similarly, the Abstract has been modified to reduce the number of words to less than 150. Claims 11, 12, 14, 15 and 21 have been amended. Claims 11-21 are pending in the application.

The Examiner has objected to claims 12, 15 and 21 because of certain formalities. These claims have been amended as suggested by the Examiner and, accordingly, are in proper form. Claim 15 has been amended to overcome the rejection under 35 U.S.C. § 112, paragraph 2, as being indefinite. The suggestions of the Examiner have been accepted and incorporated into claim 15.

It is noted that claims 18-20 have been allowed. Claim 21 has been amended to overcome the objections and should now also be allowed since that claim has been indicated to have allowable subject matter.

Claim 11 has been amended to more particularly point out applicants' invention and to further distinguish applicants' invention from the prior art, as will be discussed below. In particular, that claim now points out the "means for relative positioning of the ophthalmologic device with respect to the eye to be examined" is "before any measurement examination and/or treatment is carried out." This is a major distinction from the cited prior art. Further, the effect of the "eye tracker unit" has been expanded so that the "at least two different adjustable magnifications" are set forth as "a first magnification for determining a position of the eye relative to the optical axis and a second magnification to track a pattern of projected light marks on the eye." This proposal was made by the Examiner and has been adopted and inserted in claim 11. Claim 12 has also been amended to indicate that the positioning is "before any measurement examination and/or treatment is carried out" to further distinguish from the prior art. The remaining dependent claims are directly dependent on claim 11 and these claims are similarly further distinguished by these amendments.

The primary rejection based on prior art has been made under 35 U.S.C. § 102(b) over

Kishida. Kishida a concerns a fundus camera with supplemental measurement options in which exclusively a measurement field is tracked along the course of a blood vessel to be examined at the ocular fundus. Despite similarities of technical features in Kishida with those of the present application, the technical problem to be solved is completely different. Whereas in Kishida a measurement field is tracked over the course of a blood vessel to be examined at the ocular fundus, the object of the present invention is to minimize the subjective error sources in the alignment of the ophthalmic instrument on the optic axis of the eye, specifically, before any measurement and/or observation is carried out. This feature has now been expressly set forth in claims 11 and 12.

According to paragraph [0065] of Kishida, the alignment of the entire instrument on the eye or on the pupil is carried out by the user ("ophthalmic technician"). According to paragraph [0069], the blood vessel which is to be tracked by the measurement field is also selected by the user.

In contrast, it is stated in the evaluation of the prior art in paragraph [0009] of the present application, that the known technical solutions have the disadvantage that the exact alignment of the measuring instrument with the eye either depends on the subjectivity of the user when no automatic positioning is provided or, when automatic positioning is provided, that additional technical means which make the construction of the entire device substantially more complicated and unmanageable are always required. The object of the patentable solution in this application was made to overcome these disadvantages.

Thus, the essential difference between the claimed invention of applicants and that of Kishida is identified in the wording "means for relative positioning of the ophthalmologic device with respect to the eye to be examined" in claims 11 and 12. As now further set forth, such alignment is to be carried out before any measurement examination and/or treatment is carried out and is now incorporated in that section. Support for this is set forth in the last sentences of paragraph [0021] as well as in the method claims 18 through 21. Thus, claims 11 and 12 are clearly distinguishable over Kishida, and all claims dependent upon claim 11 are similarly distinguishable.

The Examiner also rejected claim 12 under 35 U.S.C. § 102(b) as anticipated by Sklar. As mentioned above, claim 12 has also been amended to point out that the means for relative positioning is done "before any measurement examination and/or treatment is carried out." Sklar is directed to a diagnostic and surgical laser system for the anterior portion of the eye. Voluntary and involuntary eye movements are detected by the tracking system provided therein to ensure a precise sequence of the laser pulses in the corresponding target zone. In this case, too, the tracking system is not suitable for basic alignment of the instrument on the eye before examination or treatment. Thus, claim 12 is patentably distinguishable over Sklar for the same reasons as set forth in claim 11.

The Examiner has also rejected claims 11, 13, 16 and 17 over a combination of Kasahara in view of Nishio under 35 U.S.C. § 103(a). While Kasahara describes a special endothelium camera without a magnification changer, the special endothelium camera described by Nishio has at least two magnification stages.

In addition to an observation unit and an illumination unit, the device described by Kasahara has an additional "indicator projecting means." This additional light projection device serves only for positioning in that an additionally generated light reflection (mark) is imaged on the monitor and is positioned in a target zone.

The device described in Nishio also contains an additional "alignment detecting system" (including a sensor for receiving reflected light from the eye). This system also contains an additional index light for generating evaluable light marks which are then used for positioning.

In contrast, the claimed invention of applicants is based on an eye tracker unit which detects the position of the eye and prepares control signals completely independent from the projected light marks. This, then, is the first essential difference over this pair of prior art references. Further, there should be numerous devices in the prior art having different magnification stages for imaging or observing an object of different sizes. This is not the purpose of the eye tracker unit claimed by applicants. To the contrary, the first adjustment (wide angle) of the imaging system of the eye tracker unit serves for detecting the pupil or eye as basis for the positioning of the ophthalmologic instrument. Only then are light marks placed for

diagnosis (not for positioning) and the eye movement tracked, to which end the magnification adjustment of the imaging system of the eye tracker unit is changed.

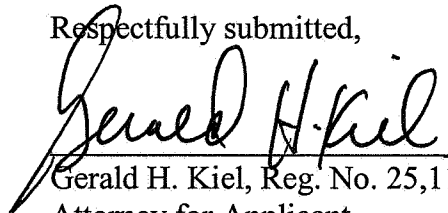
A solution of the kind claimed in this application, in which an eye tracker unit is used for detecting the eye or pupil as well as for the actual tracking of patterns or marks, is neither disclosed nor rendered obvious by either of the cited prior art references or in any reasonable combination thereof.

Finally, the Examiner rejects claims 14 and 15 over Kasahara in view of Nishio and Koest. Koest describes a pentacam (Scheimpflug camera) which can be tilted and rotated for maintaining the Scheimpflug condition. At least a tilting is absolutely required for maintaining the Scheimpflug condition, which is well known. It is believed that there is no prior art Scheimpflug camera having a unit for self-positioning and/or a unit for tracking (eye tracker unit) as claimed in claims 14 and 15. Accordingly, no combination of all three references can render the claimed invention obvious based on individual considerations of these references or any reasonable combination thereof.

The conclusion of the above discussion is that the use of an eye tracker unit for obtaining signals for the alignment of the entire device with respect to the eye before any measurement, examination and/or treatment is neither described nor made obvious in any way by the cited references taken either individually or in any reasonable combination.

Having resolved all the issues in this application, it is submitted that the application should now be passed to issue which action is respectfully requested.

Respectfully submitted,


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